

CLAIMS

1. A device for protecting weep hole channels,  
draining water and directing mortar droppings/debris from a  
single wythe wall composed of a plurality of structural  
5 masonry elements, each forming at least one hollow inner  
cell communicating through at least one drainage weep hole  
channel with the outside;

said device comprising a plurality of upwardly  
extending water-permeable bodies, each said body having a  
10 plurality of passages such as to permit water to pass  
through said passages and to prevent passing of mortar and  
other debris through said passages;

each of said upwardly extending water-permeable bodies  
being insertable into a corresponding one of the hollow  
15 inner recess cells;

each of said upwardly extending water-permeable bodies  
having a transverse cross section which decreases upwardly  
from a lower transverse cross section so as to cover the  
drainage weep hole channel by the lower transverse cross  
20 section and to allow falling of the mortar and other debris  
in the respective inner hollow recess cells onto a surface  
of each of said upwardly extending water-permeable bodies  
but at the same time to prevent falling of the mortar and  
other debris in the hollow recess cell into the hole  
25 channel;

whereby water in each of the inner cells of masonry  
blocks of the single wythe wall can flow through a

respective one of said upwardly extending water-permeable bodies into the weep hole channel and outside of the single wythe wall.

2. A device as defined in claim 1, wherein each of  
5 said upwardly extending water-permeable bodies has a pyramidal shape which is tapered upwardly to increase the inner surface cell area for more room of each of said upwardly extending water-permeable bodies for collection of the mortar and other debris.

10 3. A device as defined in Claim 1, wherein each of said upwardly extending water-permeable bodies has a conical shape which is tapered upwardly to increase the inner surface area of the cells for more room of each of said upwardly extending water-permeable bodies for collection of  
15 the mortar and other debris.

4. A device as defined in Claim 1, wherein each of said bodies has a truncated pyramidal shape.

5. A device as defined in Claim 1, wherein each of said upwardly extending water-permeable bodies has a  
20 truncated tapered conical shape.

6. A device as in Claim 1, wherein each of said upwardly extending water-permeable bodies includes a plurality of members of upwardly decreasing crossection.

7. A device as defined in Claim 1, wherein each of  
25 said upwardly extending water-permeable bodies has a height adapted to exceed a height of at least one of the structural elements.

8. A device as defined in Claim 1, wherein the lower transverse cross section of each of said upwardly extending water-permeable bodies is selected so as to correspond to a transverse dimension of a lower end of a corresponding one  
5 of the inner hollow cells of the single wythe wall.

9. The device as in Claim 1 wherein each said body is fibrous.

10. The device as in Claim 1 wherein each said upwardly extending body is texturized.

10 11. A single wythe wall, comprising a plurality of structural elements placed over one another and each forming at least one inner hollow cell communicating with outside through at least one drainage weep hole channel; and a device for draining water from said inner hollow cell;  
15 said device including a plurality of upwardly extending water-permeable bodies each having a plurality of passages such as to permit water to pass through said passages and to prevent passing of mortar and other debris through said passages;

20 each of said upwardly extending water-permeable bodies being inserted in a corresponding one of said inner hollow cells having a transverse dimension section which decreases upwardly from a lower transverse cross section so as to cover the drainage weep hollow channel, by the lower  
25 transverse cross section and to allow/direct falling of the mortar and other debris in each of the inner hollow cells onto a surface of each of said upwardly extending water-

permeable bodies but at the same time to prevent falling of the mortar and other debris in the respective inner hollow cells into the drainage weep hole channel;

whereby water in the inner hollow cells can flow  
5 through a respective one of said upwardly extending water-permeable bodies into the drainage weep hole channel and outside of the single wythe wall.

12. A single wythe wall as defined in Claim 11, wherein each of said upwardly extending water-permeable  
10 bodies has a pyramidal shape which is tapered upwardly to increase the inner surface cavity area of each of said blocks for collection of the mortar and other debris, but still allows water to pass through to the base of the wall to the drainage weep hole channel device.

15 13. A single wythe wall as defined in Claim 11, wherein each of said upwardly extending water-permeable bodies has a conical shape which is tapered upwardly to increase the inner surface hollow cell area of each of said blocks for collection of the mortar and other debris.

20 14. A single wythe wall as defined in Claim 11, wherein each of said bodies has a truncated pyramidal shape.

15. A single wythe wall as defined in Claim 11, wherein each of said upwardly extending water-permeable bodies has a truncated tapered conical shape.

25 16. A single wythe wall as in Claim 11, wherein each of said upwardly extending water-permeable bodies includes a plurality of members of upwardly decreasing crossection.

17. A single wall as defined in Claim 11, wherein each of said upwardly extending water-permeable bodies has a height adapted to exceed a height of at least one of the structural elements.

5        18. A single wythe wall as defined in Claim 11, wherein the lower transverse cross section of each of said upwardly extending water-permeable bodies is selected so as to correspond to a transverse dimension of a lower end of a corresponding one of said hollow cells of the single wythe  
10 wall.

19. The single wythe wall as in Claim 11 wherein each said upwardly extending body is fibrous.

20. The single wythe wall as in Claim 11 wherein each said upwardly extending body is texturized.

15        21. A method of draining water from a single wythe wall and protecting the drainage weep channel thereof, said single wythe wall having a plurality of structural elements placed over one another and each forming at least one inner hollow cell communicating with outside through at least one  
20 drainage weep hole channel, the method comprising the steps of:

introducing into in the inner hollow cells a plurality of upwardly extending water-permeable bodies each having a plurality of passages, such as to permit water to pass  
25 through said passages and to prevent passing of mortar and other debris through said passages; and,

forming each of said upwardly extending water-permeable bodies with a transverse dimension which decreases upwardly from a lower transverse cross section so as to cover the drainage weep hole channel by the lower transverse cross  
5 section and to direct falling of the mortar and other debris in the inner hollow cell onto a surface of each of said upwardly extending water-permeable bodies;

whereby water in each of the inner hollow cells can flow through a respective one of said upwardly extending  
10 water-permeable bodies into the drainage weep hole channel and outside of the single wythe wall.

22. A device for protecting the weep hole from clogging, for draining water and directing mortar droppings/debris from a single wythe wall composed of a  
15 plurality of structural elements each forming at least one inner hollow cell communicating through at least one drainage weep hole channel with the outside, the device comprising:

a plurality of upwardly extending water-permeable  
20 bodies each having a plurality of passages such as to permit water to pass through said passages and to prevent passing of mortar and other debris through said passages,

each of said upwardly extending water-permeable bodies being insertable into a corresponding one of the inner  
25 hollow cells;

each of said bodies having a lower base transverse cross section which covers the respective crossectional

areas of the inner hollow cells and the respective drainage weep hole channel by the lower transverse cross section and to allow falling of the mortar and other debris in the inner hollow cell onto a surface of each of said upwardly

5 extending water-permeable bodies but at the same time to prevent falling of the mortar and other debris in the hollow cell into the drainage weep hole channel;

whereby water in each of the inner hollow cells of the single wythe wall can flow through a respective one of said  
10 upwardly extending water-permeable bodies into the channel and outside of the single wythe wall.

23. A device as defined in claim 22, wherein each of said upwardly extending water-permeable bodies further has an upper upwardly extending member for collection of the  
15 mortar and other debris.

24. A device as defined in claim 22 wherein each said upwardly extending portion is a block.

25. A device as defined in claim 22 wherein each said upwardly extending portion is circular cylindrical.

20 26. A device as defined in claim 22 wherein each said upwardly extending portion is a geometric shape in cross section.

27. A device as defined in claim 22, wherein each of said upwardly extending water-permeable bodies has a height  
25 adapted to exceed a height of at least one of the structural elements.

28. A device as defined in claim 22, wherein the lower transverse cross section of each of said upwardly extending water-permeable bodies is selected so as to correspond to a transverse dimension of a lower end of a corresponding one  
5 of the inner hollow cells of the single wythe wall.

29. The device as in Claim 22 wherein each of said upwardly extending bodies is fibrous.

30. The device as in Claim 22 wherein each of said upwardly extending bodies is texturized.

10 31. A device for protecting weep hole channels, draining water and directing mortar debris from a single wythe wall, comprising

a plurality of structural elements placed over one another and each forming at least one inner hollow cell  
15 communicating with the outside through at least one drainage weep hole channel;

a device for draining water from said inner hollow cell, said device including a plurality of self-supporting upwardly extending water-permeable bodies each having a  
20 plurality of passages such as to permit water to pass through said passages and to prevent passing of mortar and other debris through said passages,

each of said upwardly extending water-permeable bodies being inserted in a corresponding one of said inner hollow  
25 cells having a transverse dimension section which completely covers the transverse cross section thereof and to allow/direct falling of the mortar and other debris in each



of the inner hollow cells onto a surface of each of said upwardly extending water-permeable bodies but at the same time to prevent falling of the mortar and other debris in the inner hollow into the channel;

5           whereby water in the inner hollow cells can flow through a respective one of said upwardly extending water-permeable bodies into the drainage weep hole channel and outside of the single wythe wall.

32. The device as in Claim 31 wherein each said body  
10 exceeds the height of a masonry block.

33. The device as in Claim 31 wherein each said body is fibrous.

34. The device as in Claim 31 wherein each said body s textured.

15           35. A device for protecting weep hole channels, draining water and directing mortar debris from a single wythe wall, comprising:

          a plurality of structural elements placed over one another and each forming at least one inner hollow cell  
20 communicating with the outside through at least one drainage weep hole channel;

          a device for draining water from said inner hollow cell, said device including a plurality of self-supporting upwardly extending water-permeable bodies each having a  
25 plurality of passages such as to permit water to pass through said passages and to prevent passing of mortar and other debris through said passages;

each of said upwardly extending water-permeable bodies being inserted in a corresponding one of said inner hollow cells having a transverse dimension section which substantially covers the transverse cross section thereof and to allow/direct falling of the mortar and other debris in each of the inner hollow cells onto a surface of each of said upwardly extending water-permeable bodies but at the same time to prevent falling of the mortar and other debris in the inner hollow into the channel;

10       whereby water in the inner hollow cells can flow through a respective one of said upwardly extending water-permeable bodies into the drainage weep hole channel and outside of the single wythe wall.

36.   The device as in Claim 35 wherein each of said upwardly extending water-permeable bodies has a transverse cross section which decreases upwardly from a lower transverse cross section.

37.   The device as in Claim 35 wherein said body exceeds the height of a masonry block.

20       38.   The device as in Claim 35 wherein each said body is fibrous.

39.   The device as in Claim 35 wherein each said body is texturized.